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INTERNAL COMBUSTION ENGINE PERMITTING PROCEDURE

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PURPOSE:

The following procedure establishes an interim policy and mechanism to regulate both the stationary and portable internal combustion (IC) engines.

APPLICABILITY:

This procedure applies to all reciprocating, piston driven IC engines. A gas turbine is an internal combustion engine that operates with rotary rather than reciprocating motion. For the purpose of this interim policy, gas turbines are excluded from this procedure.

DEFINITIONS:

BRAKE HORSEPOWER (MAXIMUM HORSEPOWER) is the maximum brake horsepower (bhp) rating specified by the engine manufacturer and usually listed on the nameplate of the portable engine.

EMERGENCY GENERATOR means any IC engine generator whose sole function is to provide back-up power when electric power from the local utility is interrupted.

INTERNAL COMBUSTION ENGINE means any reciprocating, piston driven internal combustion (IC) engine.

PORTABLE means designed and capable of being carried or moved from one location to another. An indication of portability may include, but not be limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

RENTAL BUSINESS means a business where the principal use of its engines or equipment units is to temporarily rent or lease for profit, portable engines or equipment units to operators other than the owner of the engine or equipment unit.

RENTER is a person who rents a portable engine or equipment unit from a rental business.

TRANSPORTABLE means the same as portable.

PROCEDURES:

PERMIT EXEMPT INSTALLATION/OPERATION

EMERGENCY GENERATOR(S): For the owner/operator of an emergency IC engine generator(s), a source is exempt from obtaining a Non-Title V air quality permit if all of the following conditions are true, providing there is no other emission source at the premise:

1. The total operating hours is no more than 500 hours per year, **and**
2. The total bhp is no more than 250 hp of any combination of IC engine(s).

RENTER: For a person (including the existing Permittee) who plans to operate a rental IC engine, as a renter, the owner/operator can operate any combination of rental IC engine(s) up to 90 consecutive days once per any 12-month rolling period without obtaining a permit or permit revision.

TEMPORARY OPERATION: For a person (including the existing Permittee) who plans to operate on a temporary basis, the owner/operator can operate any combination of IC engine(s) up to 90 consecutive days once per any 12-month rolling period without first obtaining a permit or permit revision.

However, for any IC engine unit over 250 hp, the owner must:

1. Send a 7-day notification to the Department. Notification shall contain, at a minimum; maker, model, serial number, horsepower rating, etc. and
2. Provide/Maintain records to demonstrate :
 - a. that the IC engine meets California Portable Equipment Registration requirements (see attached table), and
 - b. the emissions during the duration of operating would not exceed its appropriate limitation as follows:..
 - 25 tons per year of VOC
 - 25 tons per year of NOx
 - 25 tons per year of SO2
 - 15 tons per year of PM10
 - 100 tons per year of CO

INSTALLATION/OPERATION REQUIRES A PERMIT/PERMIT REVISION

EMERGENCY GENERATOR(S): For the owner/operator of emergency IC engine generator(s) if:

1. The total combined operating hours exceeds 500 hours per year, or
2. The total combined horsepower rating exceeds 250 bhp.

a source is required to obtain a Non-Title V air quality permit/permit revision.

However, if the above source can demonstrate or agree upon emission limitation to be no more its appropriate limit in the above table (under Temporary Operation, 2, b.), the daily trigger of the Best Available Control Technology (BACT, Rule 241, Section 301) will be waived.

RENTAL BUSINESS

The owner of any rental business where IC engine(s) is rented must obtain a Non-Title V air quality permit for any IC engine whose bhp is above 250.

The 250 plus bhp IC engine must either meet California Portable Equipment Registration requirements as adopted 3/27/1997 or Federal requirements of CFR 40, Subpart 89, or demonstrate BACT if the BACT requirement is triggered. If the 250 plus bhp IC engine unit was manufactured on or before 7/13/1988, the unit is grandfathered and the BACT requirement would be waived.

OTHER USERS

The owner of any IC engine(s) not qualified for exempt status must obtain a Non-Title V air quality permit. The emissions calculation must be presented using either emission factors from AP-42 or manufacturer's emission data.

Once either annual or daily BACT threshold is triggered, the owner may demonstrate compliance with either the California Portable Equipment Registration requirements as adopted 3/27/1997 or, Federal requirements of CFR 40, Subpart 89, or demonstrate BACT if BACT requirement is triggered. If the IC engine unit was manufactured on or before 7/13/1988, the unit is grandfathered and the BACT requirement would be waived.

Compliance demonstrations

California Portable Equipment Registration Requirements (Title 13, California Code of Regulations, Article 5, Section 2456)

For any IC engine manufactured after 7/13/1988, regardless of engine manufacture date, the IC engine shall:

1. Not discharge air contaminants into the ambient air in excess of 20% opacity at $\frac{3}{4}$ load or more. The opacity compliance determination shall be made in accordance with Rule 300, Section 500.
2. Not exceed particulate matter emissions concentration of 0.1 grain per standard dry cubic feet corrected to 12 percent CO₂.
3. Meet the applicable requirements of Table 1, for “resident engine” compression-ignition engines or Table 2, for spark-ignition engines of Table 2. (See Attachment 1)

Code of Federal Regulations, CFR 40 Part 89

Any new IC engine shall meet emissions standard in accordance with CFR 40 Part 89.

BACT, Rule 241

Normally, BACT is to be determined by the Department on a case-by-case basis. A top-down analysis is generally required for the Department’s evaluation. The applicant has the primary responsibility to conduct the top-down analysis, which requires that all available control technologies are ranked in descending order of effectiveness along with the associated costs.

As an alternative, any IC engine that complies or utilizes control technology recognized by the South Coast Air Quality Management District (SCAQMD) will be accepted by this Department as BACT.

Furthermore, any IC engine unit meets the requirements of:

- California Portable Equipment Registration Requirements (Title 13, California Code of Regulations, Article 5, Section 2456), or
- Code of Federal Regulations, CFR 40 Part 89.

Will be considered as an acceptable BACT demonstration.

ATTACHMENT 1

EMISSION LIMITS OR CONTROL TECHNOLOGY NARRATIVE

SECTION 2456

California Portable Equipment Registration requirements as adopted 3/27/1997

TABLE 1: COMPRESSION-IGNITION ENGINE REQUIREMENTS

RATED BRAKE HP	ENGINE REQUIREMENTS
50 - 116	810 ppm _{dv} NO _x (10.5 g/bhp-hr) or turbocharger or 4-degree injection timing retard
117 - 399	770 ppm _{dv} NO _x (10.0 g/bhp-hr) or turbocharger and aftercooler/intercooler or 4-degree injection timing retard
400 - 749	550 ppm _{dv} NO _x (7.2 g/bhp-hr) or turbocharger and aftercooler/intercooler or 4-degree injection timing retard
750 plus	550 ppm _{dv} NO _x (7.2 g/bhp-hr) or turbocharger and aftercooler/intercooler or 4-degree injection timing retard

TABLE 2: SPARK-IGNITION ENGINE REQUIREMENTS**POLLUTANT EMISSION LIMITS OR CONTROL TECHNOLOGY**

NO _x	VOC	CO
213 ppm _{dv} (4.0 g/bhp-hr) or catalyst at least 80% control	800 ppm _{dv} (5.0 g/bhp-hr) or catalyst at least 80% control	25,344 ppm _{dv} (288 g/bhp-hr) or catalyst at least 80 % control

Note: Refer the California Portable Equipment Registration requirements as adopted 3/27/1997, Article 5, Section 2456 for full details